



Memorandum

Environmental Health and Safety

TO: Steve Phelps, Facilities Services, Building Equipment Tech II

FROM: Raymond Hagen, Hazmat/Safety Specialist

CC: Tom Lopez, Facility Maintenance Director
Brian Wolfe, Facility Maintenance Supervisor
Laura Guerrero, Risk Manager
David Tavares, Hazmat Supervisor
Scott Mosley, Hearing Conservation Program, Administrator

DATE: **August 1, 2006**

SUBJECT: HEARING CONSERVATION – EMPLOYEE NOTIFICATION

This memo and attached documentation is to notify you that noise monitoring was performed in accordance with 29 CFR 1910.95(e) and the OSHA Technician Manual (OTM) Section III, Chapter 5, evaluation of noise exposures. On July 19, 2006 a walk around survey was completed by the Environmental, Health and Safety Group (EHS) to measure the duration and intensity of occupational noise that employees assigned to the Facility Services work group who perform tasks at the Library in areas identified in this report are exposed to on a daily basis.

Attached is the Noise Monitoring Survey results and employee notification letter. **All** these documents must be posted for ten **(10)** working days in a prominent area, where **all** employees who in the Container Shop have access. Based on the results of noise monitoring, your employees **are** covered by the City of Tempe, Hearing Conservation Program.

If you have any questions about the monitoring, hearing protective devices, placement of sign(s), or wish to have additional monitoring performed, please contact Program Administrator, Scott Mosley at 350-8877.

POST FOR TEN WORKING DAYS

HEARING CONSERVATION NOTIFICATION

This letter serves to notify you that noise monitoring was performed to measure the duration and intensity of occupational noise in your work environment (See Attached Noise Monitoring Survey). The results were compared to allowable exposure standards called PELs (Permissible Exposure Limits) established by OSHA. This PEL is calculated on a Time Weighted Average (TWA) over a normal 8-hour work shift. The results indicated that there is a high potential for you to exceed the PEL/TWA. Therefore, employees assigned to the Facilities Services work group that may work in areas or with equipment identified in the attached Noise Monitoring Survey are **covered** by the City of Tempe, Hearing Conservation Program.

Therefore, you will be required to receive annual audiometric hearing tests and training. Additionally, you are required to wear hearing protection. The use of hearing protective equipment provides an additional protective barrier between you and potentially high noise levels.

If you have any questions about monitoring, other requirements identified or wish to have additional monitoring performed, please contact 350-8877 or 350-2818.

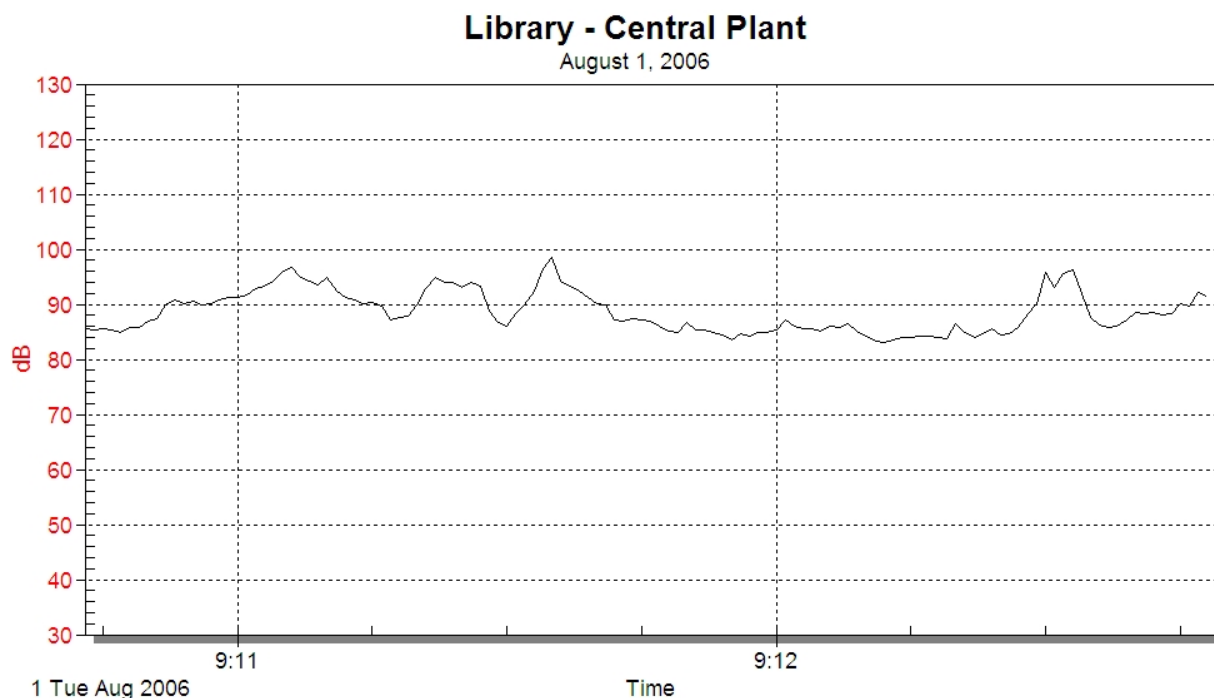
POST FOR TEN WORKING DAYS

Monitoring Synopsis

The sound meter used to perform monitoring was a Type 2 meter with data logging abilities and a frequency range of 31.5Hz ~ 8KHz. The measuring level range is 30 ~ 130dB in the "A" frequency rating. Accuracy is approximately +/- 1.5 dB. The meter was calibrated per manufactures recommendations using a standard Acoustic Calibrator (94 dB) at the start and end of monitoring and was found to be within the acceptable ranges.

There are three graphs that are attached that were identified by Facility Services employees during this walk around survey. When screening for noise exposures, sound level meter measurements and estimates of the duration of exposure are sufficient. The resulting spot readings can be used to determine the need for a more complete evaluation. Based on this monitoring event, no additional monitoring is required to establish the need for employees to remain in the Hearing Conservation Program.

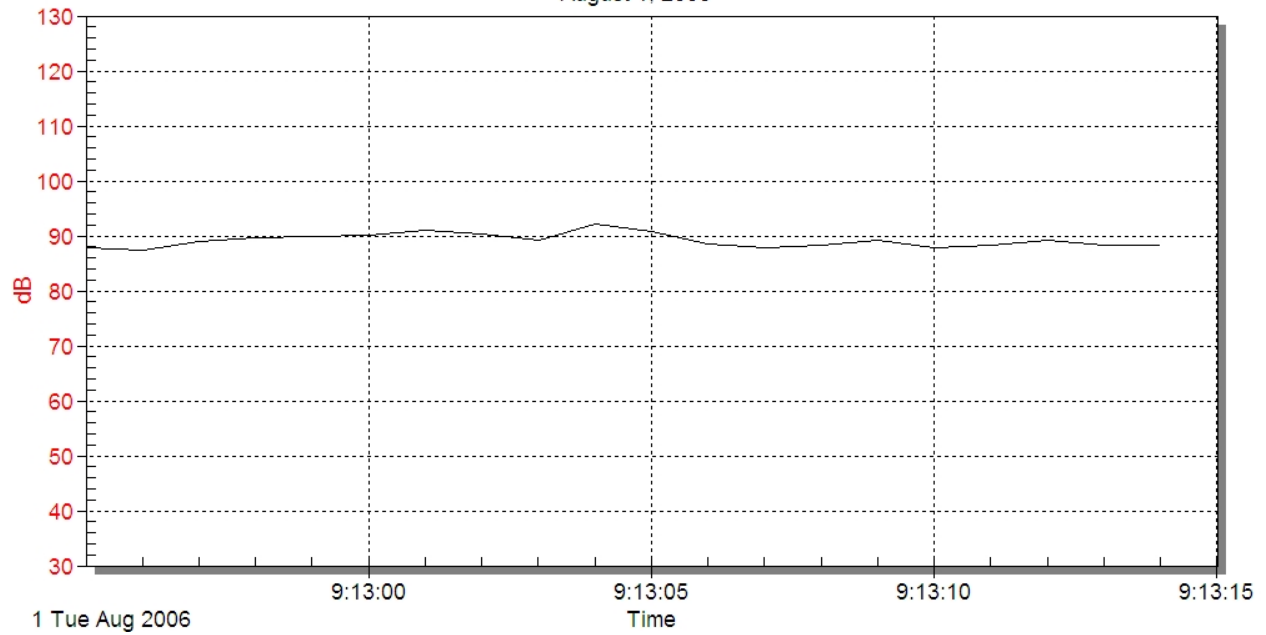
Calculation of the Time Weighted Average (TWA) is extremely difficult to determine based on numerous and varied tasks performed by individual shop personnel throughout each day. Therefore the estimated time in conjunction with peak readings and possible worse case scenarios were used to determine the need for employee's requirement to be in this program.



POST FOR TEN WORKING DAYS

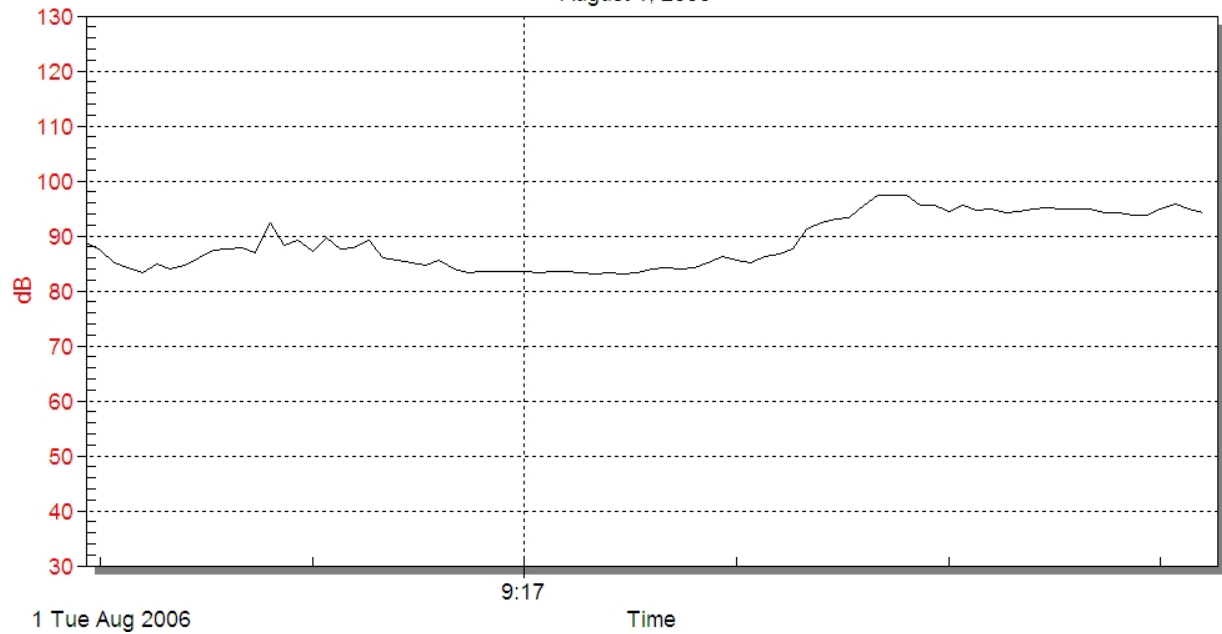
Library - Central Plant Compressor

August 1, 2006



Library - Cooling Towers

August 1, 2006



POST FOR TEN WORKING DAYS

Findings

The following new equipment was monitored with the peak dBA indicated.

Area/Equipment	Peak dBA	Area/Equipment	Peak dBA
Central Plant	98.6	Cooling Towers	97.5
Central Plant Compressor	92.2		

Additionally, other equipment such as hand tools, construction activities and other equipment used by staff for routine maintenance will increase the potential exposure to employees.

Therefore, based on the diversity of work operations, time limits with identified equipment and the diverse work requirements of individual employee's it was difficult to determine TWA's. As stated previously it is difficult to determine the length of time and individual use of equipment during each work day. Therefore, it was determined that all Facilities Services employees that work with identified equipment **remain** in the City of Tempe's Hearing Conservation Program.

Table 1 indicates the duration and sound levels to which employees may be exposed to occupational noise without experiencing hearing loss. Employees must not be exposed to impact noise greater than 140 dBA peak.

TABLE 1
PERMISSIBLE NOISE-EXPOSURE REQUIREMENTS
DURATION (hrs/day) DOSE (%) SOUND LEVELS (dBA)

8 **	33	85
8	100	90
6	100	92
4	100	95
3	100	97
2	100	100
1.5	100	102
1	100	105
0.5	100	110
0.33	100	112
0.25	100	115

Determination

POST FOR TEN WORKING DAYS

Based on the results of monitoring and discussions with Facilities Services personnel there is sufficient information to include employees that perform routine work in areas identified in this report at the Library in the City of Tempe, Hearing Conservation Program.

Requirements

Signage notifying individuals of the potential for high noise must be posted at all entry points into the areas identified in this report. Additionally, it is the responsibility of Supervisors to properly notify new employees, outside employees or contractors that enter high noise areas of the hazards and required personal protective devices required. The appropriate level of hearing protective device to be used in the container shop is:

- Any Hearing Protective Device for all equipment shall have a minimum NRR value of 29.

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